CLINICAL LABORATORY ASSISTANT

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4	3	2	1	N

1. Introduction to Clinical Laboratory Assistant
- 1.1 Identify the roles and responsibilities of team members
- 1.2 Identify the educational requirements and certification(s) of laboratory team members
- 1.3 Identify opportunities for employment in the laboratory field
- 1.4 Identify and list the functions of the professional organization(s) for the occupational area
- 1.5 Identify location of various types of clinical laboratory fields
- 1.6 Follow a chain of command
- 1.7 Practice professional work habits
- 1.8 Comply with state regulations for occupational area
- 1.9 Locate OSHA poster(s) and MSDS(s) in clinical site
- 1.10 Identify OSHA regulations that pertain to the clinical site
- 1.11 Identify biohazard labels
- 1.12 Identify different departments in a typical clinical laboratory department
- 1.13 Apply ethical standards to the occupational area
- 1.14 Apply legal standards to the occupational area
- 1.15 Demonstrate confidentiality in the occupational area
- 1.16 Demonstrate various public relations and marketing techniques
- 1.17 Identify, define and use terminology specific to the occupation
- 1.18 Demonstrate effective stress management
- 1.19 Identify several tests commonly run in each department of the clinical laboratory

2. Identifying, Handling and Cleaning Glassware
- 2.1 Identify laboratory glassware
- 2.2 Demonstrate use of glassware used in the laboratory
- 2.3 Identify importance of cleanliness of glassware in results of tests
- 2.4 Wash and sterilize glassware
- 2.5 Keep working area and equipment clean
- 2.6 Order, check deliveries, label and store laboratory equipment and supplies

3. Laboratory Safety Practices and Laboratory Accident Hazards
- 3.1 Describe first-aid treatment for cuts, needle pricks and for burns from flame, hot objects, and chemical agents
- 3.2 Complete accident report form
- 3.3 Clean and sterilize equipment that has contaminated poison
- 3.4 Discard disposable containers
- 3.5 Describe procedures for filling and emptying containers using mouth and bulb suction
- 3.6 Pour solutions from bottles safely
- 3.7 Demonstrate safe use of Bunsen Burner
- 3.8 Demonstrate safe use of centrifuge
- 3.9 Prepare specimen for testing after centrifugation

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4. Making Up Concentrations of Solutions
- 4.1 Use proper indicator for pH determination
- 4.2 Follow procedures for titration, neutralization, and filtration of an insoluble precipitate and for serial dilution methods
- 4.3 Use volumetric glassware to measure volume accurately
- 4.4 Define weights and measures using metric system
- 4.5 Weigh and measure accurately using metric system
- 4.6 Use measuring devices
- 4.7 Estimate size of beaker needed for quantity of material being used

5. Preparing Monthly and Annual Reports
- 5.1 Chart patient test results on lab slips
- 5.2 File duplicate report form for laboratory records

6. Use of Microscope
- 6.1 Use dissecting needle, scissors, and scalpel in dissection
- 6.2 Use centrifuge according to procedure
- 6.3 Prepare culture media according to procedure
- 6.4 Prepare wet mount slides
- 6.5 Prepare oil emersion slides
- 6.6 Prepare bacterial slides
- 6.7 Demonstrate procedures in preparing smears
- 6.8 Prepare blood smears
- 6.9 Select stain, method of staining and fixing smears
- 6.10 Demonstrate procedures to fix, dehydrate, clean, section and stain tissue
- 6.11 Estimate size of object under microscope in microns
- 6.12 Use simple microscope maintenance techniques
- 6.13 Record accurately all observations made under the microscope

7. Urine Testing
- 7.1 Identify possible causes of variations from normal
- 7.2 Describe and demonstrate methods of collection preservation of urine
- 7.3 Make macroscopic examinations of urine
- 7.4 Test urine for chlorides
- 7.5 Test urine for sugar
- 7.6 Test urine for albumin
- 7.7 Test urine for ketone bodies
- 7.8 Test urine for bile pigments
- 7.9 Test urine for bilirubin
- 7.10 Test urine for urobilinogen
- 7.11 Test urine for hemoglobin
- 7.12 Make microscopic examination of urine
- 7.13 Examine urine for casts

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7. Urine Testing cont.

7.14 Examine urine for cells
7.15 Examine urine for crystals
7.16 Make serologic pregnancy tests on urine
7.17 Make tests or urine for kidney function
7.18 Examine urine for organic and inorganic substances and for bacteria
7.19 Record urinalysis on specified report forms

8. Blood Tests

8.1 Describe and demonstrate methods of collecting and preserving blood
8.2 Obtain blood from veins using aseptic technique and a needle and syringe
8.3 Obtain blood from veins using aseptic technique and vacutainer set up
8.4 Obtain blood from veins using aseptic technique and butterfly infusion kit
8.5 Follow precautions when collecting blood to avoid unnecessary discomfort to client
8.6 Apply pressure to puncture site to avoid bruising
8.7 Describe and select proper tubes for blood collecting and testing
8.8 Demonstrate use of 20 mL and 10 mL red top vacutainer tubes
8.9 Demonstrate use of 5 mL blue top anticoagulant tubes
8.10 Demonstrate use of 5 mL gray top tubes
8.11 Demonstrate use of 5 mL violet top tubes
8.12 Demonstrate use of double tube draw for blood culture
8.13 Demonstrate use of 10 mL green top tubes
8.14 Accurately code and label specimen immediately post-draw
8.15 Describe normal composition and function of blood
8.16 Examine and report accurately the number, appearance and structure of blood cells
8.17 Test for sedimentation rate
8.18 Describe normal values and factors affecting sedimentation rate
8.19 Demonstrate use of Wintrobe test
8.20 Demonstrate use of Westergren test
8.21 Determine hemoglobin concentration
8.22 Complete micro-hematrocrit
8.23 Perform red blood cell (RBC) count using hemacytometer
8.24 Perform hemoglobin determination with hemoglobinometer
8.25 Tabulate differential leukocyte count of blood
8.26 Perform white blood cell (WBC) count using hemacytometer
8.27 Use Unopette for white blood cell count using hemacytometer
8.28 Determine bleeding time
8.29 Determine clotting time
8.30 Determine hematocrit

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8.31 Determine prothrombin time
8.32 Determine partial prothrombin time
8.33 Determine platelet count
8.34 Determine reticulocyte count

9. Blood Typing Tests

9.1 Describe and classify human blood groups
9.2 Describe principles of conducting blood grouping tests
9.3 Describe and demonstrate procedure for determining Rh factor with supervision only as a screening method
9.4 Describe and demonstrate the procedure for typing and cross-matching blood, with supervision only as a laboratory procedure
9.5 Describe and demonstrate miscellaneous blood matching tests with supervision only as a laboratory procedure
9.6 Describe the principles of blood bank procedures

10. Testing for Blood Chemistry

10.1 Use formula to calculate urea clearance
10.2 Prepare serum and tests for serum proteins
10.3 Prepare serum and tests for albumin
10.4 Prepare serum and tests for globulin
10.5 Prepare serum and tests for total protein
10.6 Prepare serum and tests for "A/G" ratio
10.7 Prepare serum and tests for uric acid
10.8 Demonstrate established procedures for determining blood sugar
10.9 Perform quantitative estimation of bilirubin
10.10 Calculate indirect bilirubin
10.11 Demonstrate procedures to perform tests to determine protein metabolism
10.12 Demonstrate procedures to perform test to determine enzyme levels
10.13 Demonstrate procedures to perform tests to determine cholesterol levels
10.14 Describe principles of electrolyte studies
10.15 Perform test to determine concentration of serum calcium
10.16 Describe principles and test for chlorides
10.17 Describe principles and test for sodium
10.18 Describe principles and test for potassium
10.19 Describe principles and test for phosphorus
10.20 Demonstrate procedures to prepare serial dilutions
10.21 Prepare, preserve and ship serological specimens
10.22 Select and use type and species of antigen required to perform agglutination test for febrile diseases
10.23 Perform flocculation and qualitiative tests for spirochaeta

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11. Tests on Stool and Stomach Specimens

11.1 Demonstrate procedures for macroscopic and chemical examination of feces
11.2 Examine feces for bacteria and parasites
11.3 Perform hemocult slide test
11.4 Demonstrate procedures for examination and chemical analysis of gastric content

12. Tests on Sputum Specimens

12.1 Perform physical and microscopic examinations of sputum for cellular content
12.2 Perform physical and microscopic examinations for evidence of pathogens
12.3 Perform physical and microscopic examinations for evidence of red blood cells

13. Use of Laboratory Equipment

13.1 Set up an incubator
13.2 Use microtome, knives, hones, autotechnicon paraffin oven, embedding mold and other items efficiently